National Institute of Environmental Health Sciences

Temperature change dominates the suicidal seasonality in Taiwan: A time-series analysis

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Abstract:

OBJECTIVE: The arguments between bioclimatic and sociodemographic hypotheses for the suicidal seasonality continue. The present study aimed to examine the relationships between suicidal seasonality and the climate as well as the economic factors. METHODS: The monthly suicide death rates of the total, male and female populations in Taiwan during January 1991-December 2010 were obtained from the population-based database. Autoregressive integrated moving average (ARIMA)/seasonal ARIMA (SARIMA) was used to analyze suicidal seasonality, with monthly ambient temperature, temperature increase, rainfall, sunlight, unemployment and labor force participation rates as the independent inputs. RESULTS: The models revealed that monthly temperature increase was strongly positively associated with seasonality of suicide rates of all populations (betaEuro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin)0.0184, P

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Resource Description

Exposure : ☑

weather or climate related pathway by which climate change affects health

Precipitation, Solar Radiation, Temperature

Temperature: Extreme Heat, Fluctuations

Geographic Feature: ☑

resource focuses on specific type of geography

None or Unspecified

Geographic Location: ☑

resource focuses on specific location

Non-United States

Non-United States: Asia

Asian Region/Country: Other Asian Country

Other Asian Country: Taiwan

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Injury, Mental Health/Stress

Population of Concern: A focus of content

Other Vulnerable Population: Unemployed

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified